Appendix D.—Erosion Hazard Ratings

Erosion hazard, or the susceptibility of soil to erosion, is the potential inherent in the soil itself to erode if the forces that cause erosion are applied to an area that is not adequately protected.

The erosion hazard ratings given in this survey indicate the possibility of future accelerated erosion by water and refer to sheet and rill erosion only. The hazard of water erosion by other processes, such as gully erosion or mass movement, is not included.

This method of rating differs from the method specified in the California Forest Practice Act (FPA) rules. However, information provided here (soil texture, coarse fragments, permeability, and depth) could be used to develop ratings using the FPA method. Because the soil properties described in this survey apply to the central concept of the named soil and some local variation is expected, the information should be confirmed through onsite investigation when erosion hazard ratings are developed for timber harvest plans required under the Forest Practice Act.

The ratings are intended to be used as a guide; they are not absolute. They are provided to assist land managers in planning and evaluating management practices. A high rating, for example, would alert the user to the likelihood that water erosion is a concern in areas of that soil under certain site and management conditions. The user should carefully consider the erodibility of the soil when management options are evaluated, and further onsite investigation might be necessary before decisions are finalized.

Ratings are given in the map unit descriptions (under the heading “Detailed Soil Map Units”). The ratings were determined using a method developed by the California Soil Survey Committee. Criteria used include (a) bare soil conditions; (b) the central concept of the properties of the named soil (texture, aggregate stability, infiltration rate, permeability, and depth) as it occurs within the map unit throughout the survey area; (c) climatic characteristics for the survey area; (d) the slope range for the map unit; and (e) a slope length of 50 feet. If necessary, a given rating could be adjusted by the user to actual onsite conditions for cover and slope using the same rating method. The headquarters of the Soil-Vegetation Survey can provide more detailed information regarding rating criteria.

An estimate of the organic soil cover necessary to reduce the erosion hazard is also given in the map unit descriptions. The term “organic soil cover” as used in this survey includes duff, slash, grasses, low-growing shrubs, or any organic crop residue.

The adjective ratings given in this survey indicate the degree of limitation resulting from the hazard of sheet and rill erosion. They are defined as follows:

Low.—Accelerated erosion is not likely to occur following disturbance, except in the upper part of the low erosion hazard rating numerical range or during periods of above-average storm occurrence. If accelerated erosion does occur, adverse effects on soil productivity and on the quality of water nearby are not expected. Erosion-control measures are generally not needed.

Moderate.—Accelerated erosion is likely to occur following disturbance in most years. The effects on soil productivity (especially in areas of shallow or moderately deep soils) and on the quality of water nearby may be adverse in the upper part of the moderate erosion hazard rating numerical range or during periods of above-average storm occurrence. The need for erosion control should be evaluated in these areas. A wide selection of measures and application methods is available.

High.—Accelerated erosion will occur following disturbance in most years. Adverse effects on soil productivity (especially in areas of shallow or moderately deep soils) and to the quality of water nearby are likely, especially during periods of above-average storm occurrence. Erosion control is necessary in these areas to prevent accelerated erosion. The selection of measures and methods of application is somewhat limited.

Very high.—Accelerated erosion will occur following disturbance in most years. Adverse effects on soil productivity and on the quality of water nearby are very likely, even during periods of below-average storm occurrence. Erosion control is essential in these areas. The selection of measures and methods of application is limited.